SECTION III

ORDERING SUPPLIES
And
SPECIMEN COLLECTION

Updated 2/2006

ORDERING SUPPLIES

The Bureau of Laboratories will provide request forms, kits and media and mailing containers for the collection and shipping of laboratory specimens. These supplies are provided free of charge. Please use them judiciously and only to send laboratory specimens to the Department of Health and Environmental Control. **Supplies may be obtained by indicating the quantity required on DHEC form 1323, "A Request for Laboratory Supplies". GYN Cytology forms and supplies are ordered on DHEC form 1324 and are available only to DHEC clinics.** Call 896-0913 to request these ordering forms or to request supplies.

Collection kits

These kits contain collection materials, request form, an inside screw capped containment container with label, and a cardboard mailing container with a color coded mailing label attached. These are currently accepted by State and private couriers, and the US postal service. Each kit is to be used for only one specimen,

Mycobacteriology (collection kit for TB)	Yellow Label
Enteric kit (for Bact. Culture)	Pink Label
Parasitology kit (O & P)	Blue Label
Influenza kit (during flu season)	Red tube with blue and white envelope
B. pertussis PCR kit	

Transport medium (Order request forms and shipping container separately.)
GC Culture medium
Viral Transport Media
Regan-Lowe media (for Pertussis)
Mycoplasma hominis/Ureaplasma Order directly from the Virology Section, (803) 896-0819.

Supplies
GC/Chlamydia (for Antigen Detection) Unisex swab or urine collection kit
PPT Tubes for Viral Load
Biohazard Bags
Absorbent Packs
Envelopes (for Newborn Screening and He-HIV blood spots)
Micro tubes for Blood lead---Indicate in blank space on order form
Culturette swabs---Indicate in blank space on order form

Chain of Custody Supplies

Integrity Seals	Permanent Marking Pens
Evidence Tape	Urine Containers
Diagnostic Specimen labels	Temperature strips
Tamper Proof Biohazard Bags	

GYN Cytology forms and supplies (for DHEC clinics only) Use DHEC form 1324 to order
Collection Materials
1362 GYN Cytology Request form
Cardboard slide mailer (holds 2 slides)

Shipping Container (for shipping Diagnostic specimens by courier or US postal system)
Mailing containers, screw cap: No. 10 (2 ½" x 6") No. 20 (3" x 6") No. 30 (4" x 6")
Mailing boxes: 4" x 4" 6" x 6" 8" x 8"
Rabies Container

ORDERING SUPPLIES, CON'T.

Shipping Container (for shipping infectious substances)
Hospitals and other clients using a commercial carrier must use special approved mailing containers These have been distributed, and must be returned for re-use.

Request Forms
The request forms provided by the Bureau of Laboratories are listed below. Forms marked with a + will be pre-addressed with your name, address and sender number. Since an over-supply cannot be returned to stock, please use discretion in the number you request. **DO NOT LOAN OR BORROW** preprinted forms to another client. The preprinted sender number determines where result reports are mailed. Forms are periodically revised. Please discontinue use of old forms once a revision has been made.
A separate DHEC form 1323 must be submitted for each location with a unique sender number.

Form #	Test (revision date)	Form color
1308	+Rabies (02/98)	Lt. Maroon
1310	+Forensic Urine Drug Testing (chain-of custody)	Aqua
1323	Request for Lab Supplies (8/00)	Card stock/buff
1324	Request for GYN Cytology Form and Supplies	Card stock/pink
1327	Newborn Screening (check expiration data on form)	White with green lettering
1332	+Clinical Chemistry	White
1332	Drug Testing	White
1332	+GC/ Chlamydia Screening	White
1332	+Hematology/Urinalysis	White
1332	+ HIV Hepatitis /Syphilis Serology	White
1332	+Immunology	White
1332	+Lead Analysis	White
1332	+Lymphocyte Subset Panel	White
1332	+Prenatal	White
1335	+Bacteriology	White
1335	+Gonococcal Culture	White
1335	+Mycobacteriology	White (Included in kit)
1335	+Parasitology	White (Included in kit)
1335	+Virus Isolation/Herpes	White
1339	+Hemoglobin Electrophoresis (3/95)	Lt. Green
1362	+GYN Cytology 1332(11/01)	Lt. Pink
1812(Temporary)	Newborn Screening Blood Sample Storage Option	White

+Preaddressed

DHEC District laboratories forms:
These are available from Central Supply in the Sims/Aycock Building, (803) 898-3498.

INSTRUCTIONS FOR COMPLETING THE TEST REQUEST FORM

Instructions for completing DHEC forms #1332 and 1335 can be found on the back of the forms. The instructions below are for all other forms.

Please note the highlighted areas on the forms you receive. These are the data elements that will appear on your result report. Information entered in other areas on the request form will not be returned to you on the result report. PLEASE TYPE OR PRINT ALL ENTRIES AND PROVIDE ALL INFORMATION REQUESTED.

Date Received and Laboratory Specimen Block (upper right corner) **for our Laboratory's use only**.

1. Patient Name: Enter last name, first name and middle initial,
2. Patient Birth date: Enter month, day, year. Example: Sept. 1, 1983 is written 09-01-1983.
3. Race: Insert appropriate initial as outlined below: (DO NOT USE NUMBERS)

   A = Asian — B=Black/African American
   W = White — I = American Indian/Alaskan Native
   P = Native Hawaiian/Other Pacific Islander — O = Other
   U = Unknown/Unclassified
4. Sex: Mark "X" (if blocks are indicated) Or enter M (Male), F (Female), T (transsexual)
5. Social Security # Enter patient's social security number
6. MCI ID: (Used by DHEC clinics.) Enter patient's MCI number
8. Other I.D./Physicians: To further identify or route the report. Numbers or letters may be used. Example: Patient medical record number
9. Diagnostic Code: Enter ICD-9 code (only required for Cytology)
10. County of Residence: Write the code number for the county in which the patient lives (see Table 1)
11. Sender's Name and Mailing Address: If not pre-addressed, enter a complete postal mailing address.
12. Sender Number: This number is used in the computer system to determine where the results will be sent. Most forms will be pre-addressed with the sender name, address and number. See Table 2 for Sender numbers.
13. Billing Number: This number is necessary only if the test is to be billed to someone other than the sender. It is assigned by the Bureau of Laboratories. Call 896-0810 to obtain a number.
14. Program Number: This space is to be completed only on specimens being submitted by County Health Departments. See Table 3 for the appropriate code numbers.
15. Medicaid Number: If test can be billed to Medicaid, complete this space.
16. Specimen Information: Mark appropriate boxes. Date and time collected are now required by CLIA. (This sometimes appears in another location on the form.)
17. Other Information: This section is for other information pertinent to the test(s) requested. Please complete as indicated.
18. Test Request: Mark test requested. This item determines the test(s) that will be performed.
19. Sender Copy: Tear off back copy of the request form and file for future reference as necessary.
20. Provider Code: (Cytology only) Enter Provider Code.

TABLE 1
COUNTY CODES

Abbeville	01	Greenwood	24
Aiken	02	Hampton	25
Allendale	03	Horry	26
Anderson	04	Jasper	27
Bamberg	05	Kershaw	28
Barnwell	06	Lancaster	29
Beaufort	07	Laurens	30
Berkeley	08	Lee	31
Calhoun	09	Lexington	32
Charleston	10	Marion	33
Cherokee	11	Marlboro	34
Chester	12	McCormick	35
Chesterfield	13	Newberry	36
Clarendon	14	Oconee	37
Colleton	15	Orangeburg	38
Darlington	16	Pickens	39
Dillon	17	Richland	40
Dorchester	18	Saluda	41
Edgefield	19	Spartanburg	42
Fairfield	20	Sumter	43
Florence	21	Union	44
Georgetown	22	Williamsburg	45
Greenville	23	York	46

TABLE 2
SENDER NUMBERS

Private Physician Use your S.C. Medical License number preceded by the letter M.

Group Practice A number preceded by the letter G will be assigned to group practices at their request. Use of the group number will insure that a single bill will be sent for tests submitted by all physicians in the practice. If you desire to be billed in this manner, please contact (803) 896-0810 for assignment of a group number. If each physician wishes to be billed separately, use the appropriate Medical License number.

Hospital Use the hospital license number preceded by the letter H. If the test result is to be mailed directly to the patient's physician, use the physician's name, address and sender number in the appropriate spaces on the form and write the **hospital license number preceded by H in the billing number space.**

Private Laboratory A number assigned by the Bureau of Laboratories. If not known, contact the Bureau at (803) 896-0810 for assignment.

DHEC County Health Depts. The assigned county code number preceded by a C.

BILLING NUMBERS

A billing number is only necessary if the test is to be billed to someone other than the sender. It is assigned by the Bureau of Laboratories. Call (803) 896-0810 to obtain a number.

TABLE 3
PROGRAM NUMBERS

Used only when billing to a DHEC Program

0001	Maternal and Child Health
0002	Children Rehabilitative Services
0003	Children Health
0004	Family Planning
0005	Sickle Cell Program
0007	Cancer Control
0008	Heart Disease Control
0009	Tuberculosis Control
0010	Chronic Disease Detection
0011	STD Control
0012	Home Health Services
0017	Migrant Health
0025	District/Health Dept. Program
0027	Metabolic Screening Program
0035	STD Enhanced Project
0043	Environmental Sanitation
0050	Early and Periodic Screen, Diagnosis and Treatment
0053	Edisto HIV/AIDS Consortia
0054	Medicaid Eligible
0063	Employee Health Services
0070	Communicable Disease Control
0072	HIV-AIDS Alcohol & Drug Abuse Referrals
0089	Health Hazard Evaluation
0095	WIC
0099	Indigent (Not Eligible For Medicaid)
0101	High Risk Maternity
0110	STD-Chlamydia Study
0111	AIDS Bureau of Preventive Health Services
0202	Immunization Program
0203	Hepatitis B - Infants & Children Contacts
0204	ICSC Syphilis Project
0299	Syphilis Elimination
0343	Family Planning HIV Grant

SPECIMEN COLLECTION PROCEDURES

VENIPUNCTURE PROCEDURE

Precaution:

Wear Gloves and liquid resistant lab coat or apron while collecting and preparing blood for shipment.

Collection Procedure:

1. While putting on the appropriate PPE, explain the procedure to the patient.
2. Position the patient for taking blood.
3. Apply tourniquet to the arm just above the elbow and instruct patient to make a fist.
4. Select the best vein and cleanse the skin over the site with 70% alcohol; allow to dry.
5. Use sterile needle screwed on holder. Vacuum collection tube may be inserted into holder without danger of breaking the vacuum.
6. Insert the needle into the vein and collect required tubes of blood. Orders for multiple tests may require more than 1 tube of clotted blood.
   Note: ***Collect blood in plain (red stopper) tubes before collecting blood in tubes with additives (e.g. EDTA)*** Mix tubes with additives well to prevent clotting.
7. Release tourniquet, withdraw needle from vein and apply pressure on venipuncture site with dry sponge (cotton). Do not cover the injection site with an alcohol sponge while withdrawing needle.
8. Have patient apply pressure on the venipuncture site for 2-3 minutes to prevent leakage of blood under the skin and formation of a hematoma. When site no longer bleeds, a bandage may be applied if desired.
9. Label specimen tube with proper patient identification information.
10. Complete all requested information on the test request form.
11. Properly dispose of needles (in biohazard puncture proof sharps container) and other contaminated materials used during venipuncture.

Serum Specimen Preparation:

1. Allow the tube of blood to remain undisturbed in an upright position at room temperature for 20-30 minutes.
2. After clot has formed gently loosen clot at the top; "rim" with a sterile applicator stick if necessary.
3. Centrifuge tubes for 10-15 minutes.
4. Remove serum carefully with sterile transfer pipet and transfer to a clean sterile rubber-stoppered tube or to a screw-top vial. Avoid transferring any red cells.
5. Label tube or vial with patient's name and/or code number running up the tube. Do not wrap around or Flag the label by pressing ends together and extending from the tube.
6. Store tubes of labeled serum in refrigerator (2º-8º C) until ready to ship to the laboratory.

If using separator (gel) tubes omit steps 2 and 4 above. Be sure gel forms a distinct barrier between serum and clot.

If sending whole blood in vacutainer tube, omit steps 2-4. Store at room temperature.

See individual tests in Section II for specific instructions.

DRIED BLOOD SPOTS FOR NEWBORN SCREENING
HEEL-STICK PROCEDURE

Supplies:

The filter paper to be used in the collection of the specimen for the initial testing is attached to DHEC form 1327. This form is not pre-addressed because of the filter paper. However, pre-addressed envelopes for mailing are available See page III-1 to order.

Preparation:

Blood should be collected **at least 24 hours after birth** or as closely as possible to the time of discharge from the hospital. If discharged early, specimens collected from infants receiving only non-lactose containing feedings must be clearly marked as such.

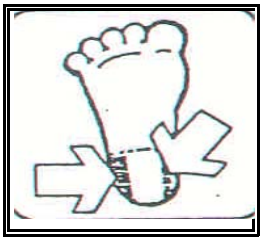
Cord blood is NOT acceptable for newborn screening in SC and should never be applied on the filter paper collection form.

To aid in getting sufficient circulation to collect an adequate sample,
You may place the infant's foot in warm water (no higher than 104ºF) for 3 minutes, or wrap in a warm moist towel or diaper.

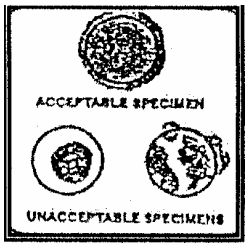
Collection Procedure:

Precaution: Wear gloves and liquid resistant lab coat or apron while collecting and preparing blood for shipment.

1. Cleanse infants heel with 70% isopropyl alcohol (use only rubbing alcohol)
2. Allow heel to air dry
3. The puncture should be within the area shown.
4. Using lancet, perform puncture while holding the infants limb in a dependent position



5. Gently wipe off first drop of blood with sterile gauze or cotton ball (initial drop contains tissue fluid).
6. Wait for spontaneous flow of blood
7. Apply gentle pressure with thumb & ease intermittently as drops of blood form
8. Touch printed side of filter paper to the blood spot & fill each printed circle with a SINGLE application of blood. The filter paper should touch only the drop of blood and should not be pressed against the skin around the puncture. Observe the saturation of each printed circle as the blood flows through the filter paper. Spotting should be done only on the printed side. Do not layer successive drops of blood on the circle. If blood flow diminishes, repeat steps 1-8 to completely fill the circles When properly filled, the blood spot will be the same size on both sides of the filter paper.
9. Allow blood specimen to AIR dry thoroughly on level non absorbent surface such as a plastic coated test tube rack **at least 4 hours at room temp**. DO NOT stack or heat to dry.
10. Place dried filter paper forms into mailing envelope provided **Mail within 24 hours** by first class mail



Heel-stick procedure, cont.

Special Circumstances:

Transfusion:
If the infant is to undergo a transfusion of blood products, a specimen should be obtained prior to the transfusion. If this is not possible, collect the specimen and mark the form "Transfused Yes" indicating the date of the most recent or last transfusion. Infants who receive transfusions should have a repeat hemoglobinopathy screening 2 months after the date of the last transfusion.
Do not mark the "Transfused yes" box if the transfusion took place 2 months before the collection date.

Premature Infants
In premature infants, the results can be falsely abnormal.
If the infant is on a lactose containing feeding, the specimen should be collected at least 24 hours after birth.
If the infant is receiving only IV fluids or total parenteral nutrition, the specimen may be collected at least 24 hours after birth and the lab slip marked "TPN" or "NPO"
All premature infants should receive their initial screening by 7 days of age regardless of their health status.

PITFALLS

1. Failure to wipe off alcohol residue may dilute the specimen and adversely affect test results.
2. Puncturing the heel on posterior curvature will permit blood to flow away from puncture, making proper spotting difficult. DO NOT LANCE ON PREVIOUS PUNCTURE.
3. Milking or squeezing the puncture may cause hemolysis and a mixture of tissue fluids with the blood.
4. Capillary tubes may be used; however, we do not recommend this procedure since application of blood with a capillary tube results in scratching the surface of filter paper, adversely affecting test results.
5. Avoid touching area within filter paper circles before blood is applied.
6. Do not allow water, feeding formulas, antiseptic solutions, etc. to come in contact with the sample.
7. Do not place filter paper in the envelope until thoroughly dry.
8. Insufficient drying adversely affects test results.
9. DO NOT mash blood into filter paper.
10. DO NOT staple or tape flap over blood spots.
    DO NOT SHIP DRIED BLOOD SPOT SPECIMENS IN PLASTIC BAGS.

DRIED BLOOD SPOTS FOR HIV TESTING
FINGERSTICK PROCEDURE

Supplies:

If a serum specimen cannot be obtained for HIV testing, dried blood spots from capillary blood may be substituted. The filter paper to be used in the collection of dried blood spots for HIV testing is attached to DHEC form 1339, the HEMOGLOBIN ELECTROPHORESIS/HIV REQUEST FORM. The block, 230 BLOOD SPOT HIV-1, in the lower right-hand corner must be checked. Envelopes for mailing specimen are also available. See Page III-1 to order

Note: For infants less than one year puncturing the heel is recommended See heel-stick procedure, page III-8 For older patients finger stick capillary blood is satisfactory

Capillary Blood Collection Procedure:

Precaution: Wear gloves and liquid resistant lab coat or apron while collecting and preparing blood for shipment. :

1. Cleanse the 3rd or 4th finger with alcohol and dry with sterile gauze.
2. Puncture finger with sterile, disposable lancet.
3. Wipe away first drop of blood.
4. When next large drop of blood appears, touch filter paper circle to blood. Do not touch the filter paper to the skin around the puncture.
5. Make single applications filling each circle. Do not superimpose blood drops.
   Be sure that the filter paper is saturated with blood through to the other side.
   . When properly filled, the blood spot will be the same size on both sides of the filter paper.
   Do not send the specimen if the circles are not completely filled. Collect a second sample.
6. Allow the specimen to dry at room temperature **for at least 4 hours** or overnight.
7. Place dried filter paper specimen into mailing envelope provided
   Do not ship dried blood spot specimens in plastic bag.
8. Mail to laboratory within 24 hours by first class mail.
   Note: All the circles are needed if tests have to be repeated or additional tests run.

PITFALLS

1. Failure to wipe off alcohol residue may dilute the specimen and adversely affect test results.
2. Milking or squeezing the puncture may cause hemolysis and a mixture of tissue fluids with specimen.
3. Use of a capillary tube is not recommended since application of blood with a capillary tube results in scratching the surface of filter paper, adversely affecting test results.
5. Avoid touching area within filter paper circles before blood is applied.
6. Do not place filter paper in the envelope until thoroughly dry.
   Insufficient drying adversely affects test results. Allow at least 4 hours drying time and
   DO NOT ship in plastic bags.

SPECIAL COLLECTION PROCEDURES FOR
BLOOD LEAD

Finger/heel-sticks are appropriate for screening. They require vigorous cleaning and attention to detail to prevent contamination of the sample during collection. Venipuncture is used for confirmation of an elevated finger/heel-stick. All three collection methods provide a quantitative result. EDTA microtainers are available for finger and heel sticks. Use DHEC form 1332.

Preparation:

Routine procedures for the collection and handling of potential infectious materials should be observed. The collector should wash his hands and glove with dust-free gloves before preparing the patient for specimen collection. **Gloves which have dust on the exterior surface should be rinsed off with tap water.**

Venipuncture:

1. Scrub the collection site with an alcohol wipe.
2. Dry with gauze.
3. Repeat steps 1 and 2.
4. Do venipuncture. Use 3 ml or larger vacuum tube containing EDTA anticoagulant.
5. Mix the blood immediately after collection with the anticoagulant by gently rocking the specimen end to end several times.
6. Label tube with patient's name running up the tube. If using a paper label, do not wrap label completely around tube. Press loose ends together to form a flag.
7. Complete DHEC form 1332. See instructions on back for completing.

Fingerstick:

NOTE: Puncturing the fingers of infants less than 1 year of age is not recommended. Puncturing the heel is more suitable for these children (NCCLS, 1999).

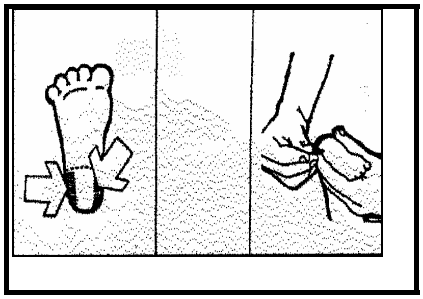
1. Cleanse child's 3rd or 4th finger with an alcohol wipe.
2. Blot dry with gauze.
3. Repeat steps 1 and 2.
4. Puncture finger with sterile lancet.
5. Allow the first drip of blood to fall onto gauze.
6. Touch the lip of collection tube into the blood and fill ¾ full. Gently massage finger to keep blood flowing. Tilt the tube slightly
7. After sample has been collected, instruct mother to hold gauze on the child's finger until bleeding stops.
8. IMPORTANT: Immediately after collection, mix blood thoroughly with the anticoagulant in the tube by gently rocking the tube end to end 8 times.
9. Label tube with patient's name and date of collection. Wrap label around tube and press loose ends together to form a flag extending from the tube. Do not wrap label around cap
10. Complete DHEC form. 1332
    See instructions on back for completing

Heel-stick (Used for children less than 1 year of age)

1. Cleanse infant's heel with an alcohol wipe.
2. Blot dry with gauze.
3. Repeat steps 1 and 2.
4. Using lancet perform puncture as illustrated. Stay within the shaded areas.

Blood Lead Collection procedures, cont

5. Allow first drop of blood to fall onto gauze.
6. Touch the lip of collection tube into the blood and fill ¾ full. Gently massage the heel to keep blood flowing. Tilt tube slightly outward from heel. Gradually lower the tube as it fills. Apply gentle pressure with thumb and ease intermittently to maintain blood flow.



7. After sample has been collected, instruct the mother to hold gauze on the child's heel until bleeding stops.
8. IMPORTANT: Immediately after collection, mix blood thoroughly with the anticoagulant in the tube by gently rocking the tube end to end 8 times.
9. Label tube with patient's name and date of collection. Wrap label around tube and press loose ends together to form a flag extending from the tube.
10. Complete DHEC form 1332. See instructions on back for completing.

Specimen Preservation and Transport

Refrigeration is not required, but is recommended prior to shipment. It is not necessary to refrigerate the specimen during shipment. Mail specimens to the laboratory the same day they are collected if possible. See section IV for appropriate shipping container, packaging and transport instructions.

SPECIMEN COLLECTION PROCEDURES

HEPATITIS C (HCV)
TOTAL ANTIBODY and QUANTITATION (RNA)

Note: This test is only available for DHEC HCV project sites or by special request

Principle:

To properly collect a blood specimen for Hepatitis C, total antibody testing by EIA, and /or PCR Quantitation (RNA) and confirmation by RIBA

Patient preparation:

No special preparation

Supplies:

1. 1 Serum separator tube
2. Cold packs for shipping
3. DHEC form1332

Collection Procedure:

Precaution: Wear gloves when collection blood samples

1. Use serum separator tube, and Collect a full tube of blood
2. Allow to clot at room temperature and centrifuge within four hours of collection. Invert the tube after centrifugation to verify that the serum separator is intact and no cells enter the serum. If cells enter the serum, repeat centrifugation. Same specimen can be used for both tests

Specimen Handling:

1. Write the patient's name on the serum separator tube or use a patient label.
2 Complete a DHEC form 1332 .See instructions on back of form for completing Mark test # 224.

Specimen Preservation and Transport

1. Place the sample in a container with enough cold packs to maintain a temperature of 2º to 8º C during shipment. Sample must arrive at the laboratory within 24 hours of collection.
2. Label the outside of the container as HCV Viral Load
   Note: The HCV samples can be shipped with HIV-I RNA Viral Load samples if desired.
3. See section IV for appropriate shipping container, packaging and transport instructions.

Causes for Specimen Rejection:

1. Serum separator tube not used
2. Specimen not shipped with cold packs or specimen not cold on arrival.
3. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF
ENTERIC PATHOGENS

Principle:
To properly collect a stool specimen for the isolation of the following enteric pathogens: *E coli 0157, Salmonella, Shigella, Yersinia, Campylobacter, Vibrio, Staphylococcus, Clostridium perfringens and Bacillus cereus.*

Patient Preparation:
No special preparation.

Supplies:
1. Wide-mouthed container.
2. Enteric kit with Cary-Blair transport media. See page III-1 to order.
3. DHEC form 1335

Collection Precautions:
Wear gloves when collecting stool specimens.

Collection Procedure (Stool):
1. Collect stool in a clean (not necessarily sterile) wide-mouthed container with a tight-fitting lid. These containers must be free of preservatives and detergents.
2. **Do not collect specimen from toilet. Avoid contamination with urine**.
3. Infant specimens may be collected in a disposable diaper with plastic side facing inside.
4. Collect a walnut sized piece if stool is formed or 5-10 ml if stool is liquid.

Cary-Blair Transport media
Formed feces: use tongue depressor or spoon inside the lid to transfer walnut size portion of stool.
Liquid feces: use pipette to transfer 5-10 ml of liquid stool to the transport media. Replace cap on tube and refrigerate until transported.

Specimen Handling:
1. Place a patient identification label on the transport medium
2. Complete a DHEC form 1335 to accompany specimen. See instructions on back of form
   Be sure to complete additional test specific information
   Specimen Type/Source: Mark X by Feces
   Date Collected
   Organism Suspected: Indicate name of suspected organism
   NOTE: Routine culture includes testing for *Salmonella, Shigella, Campylobacter, and E. coli 0157.* Request for other specific pathogens must be indicated on the laboratory request form.
   Test Requested: Mark 508 Enteric Culture.

Specimen Preservation and Transport:
1. Ship specimens in transport media in cooler with cold packs. Specimen should be received within 48 hours of collection.
2. See section IV for appropriate shipping container, packaging and transport instructions

Specimen Rejection:
1. Specimen too old.
2. Use of improper transport media or transport conditions.
3. Insufficient quantity
4. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF *NEISSERIA GONORRHOEAE*

Principle:
To properly collect an eye culture, rectal culture and oropharyngeal culture for the diagnosis of *Neisseria gonorrhoeae.* To properly collect a cervical, urethral and vaginal culture in cases of assault or sexual abuse.

Patient Preparation:
For male urethral culture: The patient should not have voided for at least 1 hour before performing a culture, especially men without a discharge.

Supplies:
1. Sterile Dacron or Rayon swab
2. Sterile thin, flexible wire with Dacron or Rayon swab (males)
3. GC culture kit with Transgrow bottle for *N. gonorrhoeae* .See page III-1 to order.
4. DHEC form 1335
5. Speculum (cervical, vaginal)

Collection Precautions: (All specimens)
Wear Disposable Gloves And Protective Eye Wear When Collecting And Handling Specimens.

Collection Procedure: (Eye)
1. Touch a sterile swab to purulent discharge. If necessary, lower eyelid may be pulled down and the swab touched to the conjunctival mucosa.
2. Inoculate Transgrow bottles as described under Inoculation of Transgrow medium

Collection Procedure: (Rectal)
1. Have the patient bear down slightly for ease in insertion of swab.
2. Insert a sterile swab approximately 3 cm into the anal canal using lateral pressure to avoid entering any fecal mass. If gross fecal contamination of the swab occurs, it should be discarded into a biohazard container and a repeat specimen obtained.
3. Rotate the swab to sample crypts just inside the anal ring and allow the swab to remain in the anal area for several seconds for better absorption onto the swab.
4. Inoculate Transgrow bottles as described under Inoculation of Transgrow medium.

Collection Procedure: (Oropharyngeal [Throat])
1. Using a tongue blade to hold the tongue down, take a specimen directly from the back of the throat, carefully avoiding contact with teeth, cheeks, gums or tongue when inserting or removing the swab.
2. Rub a sterile swab over the back wall of the throat and tonsillar crypts.
3. Inoculate Transgrow bottles as described under Inoculation of Transgrow Medium.

Collection Procedure: (Cervical)
1. Obtain the cervical specimen with the aid of a speculum that has been moistened with water. Other lubricants may contain antibacterial agents.
2. Insert the speculum and if unable to visualize the cervical os, remove excess mucus with swab.
3. Insert another sterile swab into the endocervical canal approximately 2-3 cm. Move the swab in a rotary motion for a few seconds to permit absorption of the exudate. If the patient is pregnant, and there has been no vaginal bleeding, insert swab into the endocervix only until the tip is no longer visible and rotate gently for a few seconds).
4. Inoculate Transgrow bottles as described under inoculation of Transgrow medium.

Collection Procedure: (Vaginal) for Children and Hysterectomy Patients Only

1. Insert the speculum.
2. With a sterile swab obtain the specimen from the posterior vaginal vault.
3. Allow a few seconds for absorption of material.
4. If the hymen is intact, a swab of the vaginal orifice will suffice.
5. Inoculate Transgrow bottles as described under Inoculation of Transgrow medium.

Collection Procedure: (Urethral Culture - Females)

1. Massage the urethra against the pubic symphysis from vagina to orifice to express discharge.
2. If no discharge is evident, insert a sterile flexible thin wire swab approximately 2 cm into the urethra and rotate for several seconds.
3. Withdraw swab and inoculate Transgrow bottle as described under Inoculation of Transgrow

Collection Procedure: (Urethral - Males)

1. Insert a sterile flexible swab with a thin wire shaft 2-4 cm into the urethra.
2. Once inserted, rotate the swab gently to ensure contact with all urethral surfaces.
3. Leave inserted for 2-3 seconds for better absorption of material.
4. Withdraw swab and inoculate Transgrow bottle as described under Inoculation of Transgrow.

Inoculation of Transgrow Medium

1. Have Transgrow at **room temperature; check the expiration date** before inoculation.
2. Hold the bottle in an upright position. Remove the cap only when ready to inoculate.
3. Soak up excess moisture in the bottle with the specimen swab and roll the swab from side to side over the entire surface of the medium starting at the bottom of the bottle.
4. Remove swab from bottle and discard into a biohazard container.
5. Recap the bottle tightly.

Specimen Handling:

1. Place label with patient's name on back of Transgrow bottle where chocolate colored medium is layered. **Do not place label on clear side of bottle**. This window is needed to observe growth.
2. Complete a DHEC form 1335 to accompany specimen. See instructions on back of form Be sure to complete test specific information.
   Specimen: Mark X by the appropriate type and write in the site.
   Was Culture Incubated Before Transport?: mark X in the appropriate space(s).
   Test Requested: Mark X in the appropriate space.

Specimen Preservation and Transport:

1. Place the Transgrow bottle in an upright position in an incubator set at 35°C as soon as possible after inoculation. **Never refrigerate the medium after inoculation as cold temperature will rapidly kill gonococci.** Incubate until ready to ship,
2. If an incubator is not available, make sure culture is shipped on the same day as collected.
3. If the specimen is collected on Friday and cannot be shipped until Monday, incubate over the weekend, but remove first thing Monday morning to prevent contaminant overgrowth.
4. If state courier is used, cultures collected on Friday may be shipped on Friday and marked as not incubated.
5. See section IV for appropriate shipping container, packaging and transport instructions.

Specimen Rejection:

1. Transgrow media not used or Transgrow media expired.
2. Specimen in transit for more than 5 days.
3. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF
GROUP A
BETA HEMOLYTIC STREPTOCOCCUS
OR DIPHTHERIA

Principle:
To properly collect a throat swab for the culture of Beta Strep Group A or *C. diphtheria*

Patient Preparation:
No special preparation.

Supplies:
1. Culturette swab kit containing Stuart's medium Use form 1323 to order and indicate culturette in blank space on form
2. DHEC form 1335

Collection Procedure for Throat Swab:
1. Shine a bright light if possible over the shoulder of the specimen collector into the oral cavity of the patient so that the swab can be guided to the posterior pharynx.
2. The patient is instructed to tilt his/her head back and breathe deeply.
3. Depress the tongue with a tongue depressor to help visualize the posterior pharynx. Use culturette kit. Do not use calcium alginate swabs.
4. Extend the swab to the back of the throat between the tonsillar pillars and behind the uvula.
5. Have the patient phonate a long aah which will lift the uvula and help to prevent gagging.
6. The tonsillar areas and posterior pharynx should be firmly rubbed with the swab.
7. Care should be taken not to touch the teeth, cheeks, gums or tongue when inserting or removing the swab to minimize contamination with normal mouth flora.
8. After collection, place the swab back into the culturette and break or squeeze the ampule. Note: Notify the DHEC Bacteriology Section (803-896-0805) when a diphtheria specimen is to be collected so that special isolation media can be prepared.

Specimen Handling
1. Place a patient label on a culturette swab kit.
2. Complete a DHEC form 1335 to accompany specimen. See instructions on back of form
   Be sure to complete test specific information:
   Specimen Site: Mark X in the appropriate space and enter the site.
   Test Requested: Mark X in the appropriate space.
   Organism suspected: Indicate Group A strep or diphtheria

Specimen Preservation and Transport
1. Store and ship culturette at room temperature
2. See section IV for appropriate shipping container, packaging and transport instructions

Specimen Rejection
1. Ampule in culturette not crushed.
2. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF
GROUP B
BETA-HEMOLYTIC STREPTOCOCCUS

Principle:
To properly collect a vaginal or rectal culture for the detection of beta-hemolytic Group B Streptococcus or *Streptococcus agalactiae.*

Patient Preparation:
No special preparation.

Supplies:
1. Culturette swab kit Use form 1323 to order and indicate culturette in blank space.
2. DHEC form 1335
3. Speculum

Collection Procedure: (Vaginal)
1. Insert the speculum.
2. With the Culturette swab obtain the specimen from the posterior vaginal vault.
3. Allow a few seconds for absorption of material.
4. Place the swab back into the culturette and break or the ampule.

Collection Procedure: (Rectal)
1. Have the patient bear down slightly for ease in insertion of swab.
2. Insert the culturette swab approximately 3 cm into the anal canal using lateral pressure to avoid entering any fecal mass. If gross fecal contamination of the swab occurs, discard into a biohazard container and another specimen obtained.
3. Rotate the swab to sample crypts just inside the anal ring and allow the swab to remain in the anal area for several seconds for better absorption of organisms.
4. Place the swab back into the culturette and break the ampule

Specimen Handling:
1. Place a patient label on the culturette swab kit.
2. Complete a DHEC form 1335 to accompany specimen **See instructions on back of form**
   Be sure to complete additional test specific information
   Specimen Site
   Organism Suspected:
   Test Required: Mark Test #510 Non-Enteric Culture & ID

Specimen Preservation and Transport:
1. Store and ship culturette at room temperature
2. Specimen should reach laboratory within 48 hours of collection
3. **See section IV for appropriate shipping container, packaging and transport instructions.**

Specimen Rejection:
1. Ampule in culturette not crushed.
2. Swab contaminated with feces
3. Specimen in transit more than 2 days
4. Universal rejections, Section I

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SPECIMEN COLLECTION FOR CULTURE OF
MYCOBACTERIUM (TB)

Principle:
To properly collect a sputum or urine specimen for the diagnosing and monitoring of tuberculosis and other mycobacterial infections.

Supplies:
1. (a) Mycobacteriology collection kit (50 ml plastic sputum collection tube, metal can and cardboard mailing container) See page III-1 to order.
   (b) Sterile screw cap container with a round opening of at least 2 inches for urine
2. DHEC form 1335
3. Particulate respirator (PR)

Collection Procedure: (All Specimens)
Wear Disposable Gloves and a Particulate Respirator When Collecting Specimens

Patient Preparation: (Sputum)
1. Explain to patient the importance of how to collect and handle a sputum specimen. Give the patient the sputum collection kit and COLLECTION OF SPUTUM SPECIMENS FOR MYCOBACTERIA (TB) sheet.
2. If the nurse must remain with the patient while he/she is coughing, the nurse should wear a particulate respirator.
3. Have the patient collect an early morning sputum sample.
4. Ask the patient to breathe deeply, exhale, and then cough deeply. Steam from a hot shower or a boiling kettle may help to stimulate the flow of secretions. Also, drinking several cups non alcoholic liquids will assist in raising sputum.
5. Patient should brush his/her teeth and/or rinse with water, not an antiseptic solution before obtaining the sputum specimen to reduce the overgrowth of mouth flora,
6. The patient should submit a series of three (3) sputum samples over a period of three days (one/day), if specimens are being collected for initial diagnosis.

Collection Procedure (Sputum)
1. Remove the cap from the sterile container without touching the inside of the container. This will avoid contamination of the specimen which results in having to submit another specimen.
2. Patient is instructed to take a deep breath, hold it momentarily and cough deeply from the deepest part of the chest. Saliva and nasal secretions which contain few acid-fast bacteria are not to be collected.
3. Instruct the patient to spit the sputum into the appropriate sterile container until at least 5 ml or 1 teaspoon is obtained. Replace cap on the container. A minimum of 5 ml is needed for culture.
4. Avoid soiling the outside of the container. If soiling does occur, wipe with a clean cloth wet with alcohol soap and water, or 1:10 bleach solution, and then wash hands.
5. Sputum specimens should be free of food particles and other extraneous material.
6. Place the cap on plastic tube or sterile container and screw to close tightly.

If patient is to collect sputum in the home, give patient sputum collection and mailing containers and instruction sheet on how to obtain a sputum sample.

Collection Procedure: (Urine)
The patient should submit a series of three (3) urine samples over a period of three days (one/day) if specimens are being collected for initial diagnosis.

Female- midstream voided:

1. Have patient thoroughly clean the urethral area with soap and water.
2. Instruct patient to sit on toilet, and to manually separate labia minora with one hand and keep them separated while voiding the first portion of urine into the toilet.
3. After several ml have passed, have patient collect the midstream portion into the specimen container without stopping the flow of urine. Try to avoid touching the lip or inside of the container with the hand.
4. Have the patient finish voiding into the toilet.
5. Amount of urine needed is 10 ml. Screw cap on plastic tube to close tightly.

Male-midstream voided:

1. Clean the glans with soap and water.
2. While holding foreskin retracted, begin voiding.
3. After several ml have passed collect the midstream portion into the appropriate container without stopping flow of urine.
4. Have the patient finish voiding into the toilet.
5. Amount of urine needed is 10 ml. Screw cap on plastic tube to close tightly.

For collection procedures on other specimens see chart on Collection and Shipment of Mycobacterial Specimens.

Specimen Handling:

1. Place a patient identification label on the 50 ml screw capped tube.
2. Complete a DHEC form 1335 to accompany specimen See instructions on back of form
   Be sure to complete test specific information:
   Agent suspected: Enter the suspected agent
   Specimen source: Mark "X" by the appropriate source.
   Date & Time Collected:
   NOTE: All clinical specimens should be ordered using Test Code 601. Test Code 602 is reserved exclusively for laboratories that have isolated Mycobacteria and need them identified. Do not request drug susceptibility testing (Test Code 604) when submitting specimens from suspected new cases of tuberculosis. All initial isolates of M. tuberculosis will be tested for susceptibility to INH, rifampin, ethambutol, streptomycin and pyrazinamide.

Specimen Preservation and Transport: Sputum:

1. Refrigerate samples if shipping is delayed over 24 hours. This will decrease overgrowth of other microorganisms which delay culture results.
2. Place the collection tube in the metal can and close screw cap securely.
   Be sure neither plastic tube nor metal can are soiled with sputum or urine.
3. Wrap the completed DHEC 1335 laboratory form around the metal can. Be sure the date the specimen was collected is on the form. If the laboratory form is around the plastic tube instead of the metal can the laboratory must autoclave it before it can be handled.
4. Place the metal can in the pre-addressed, round cardboard mailing container
5. Mail specimen on the day it was collected, if possible, but do not mail specimen on Fridays. Refrigerate the carton until mailed.

Specimen Preservation and Transport Urine.

1. If specimen is urine, ship cold with cold packs.
   Place a plastic bag over the fiberboard carton and place in a Styrofoam cooler with cold packs for transportation.
2. Label outside of cooler as Urine for TB testing

Specimen Rejection:

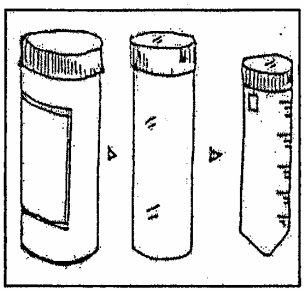
1. Specimen broken or leaked in transit. Sterile body fluids may be processed with the approval of the Supervisor or Division Director.
2. Specimen > 5 days old.
3. Universal rejections, see Section I

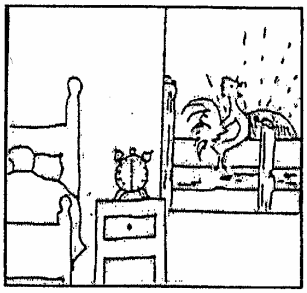
SPECIMEN COLLECTION FOR CULTURE OF MYCOBACTERIA (TB)

SPECIMEN TYPE	TIME	AMOUNT	NUMBER	SPECIAL PROCEDURE
Sputum	Early AM On Waking	5-10 ml.	Series of 3 One/Day	Sputum-material coughed up from deep in lungs-not saliva
Urine	Early AM	Entire specimen, centrifuge 10 ml.	Series of 3 One/Day	Voided midstream specimen collected as aseptically as possible. Transport to lab immediately.
Gastric Washing	Early AM	10 ml.	1 or more as needed	No food after midnight. Pass 20-50 ml. sterile distilled water through stomach tube and draw off specimen in sterile tube.
Biopsy				No fixative or preservatives (saline only)
Feces		Formed-send walnut sized portion Liquid-send 10 ml.	1 or more as needed	
Sterile body fluids other than blood		10 ml.	1 or more as needed	
Swabs of drainage or other material				Use small amt of sterile saline to keep swab moist. **Do not use transport media. Swabs are not usually productive specimens for mycobacteria.**

Use a Mycobacteriology (TB) collection kit for all specimen types

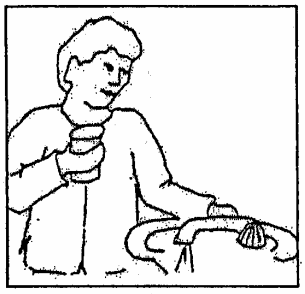
Culture Collection of Sputum for Detection of Mycobateria

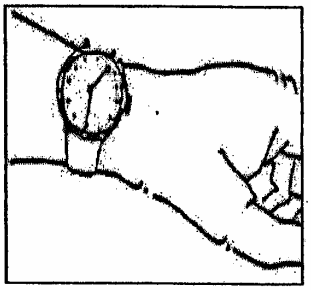


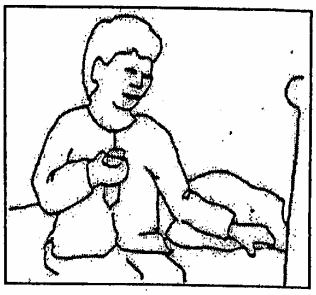


1. Use laboratory approved container.

2. Collect early morning specimen.



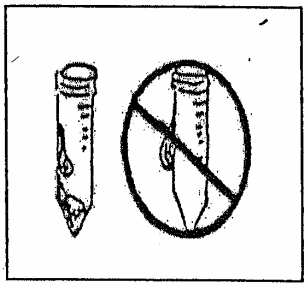


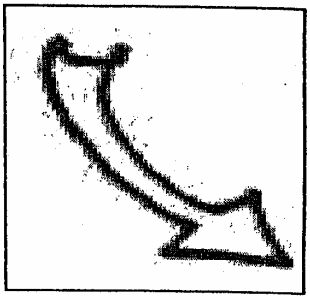


3. Rinse mouth with water .

4. Wait at lest 1 minute.

5. Sit on side of bed.





6. Cough deeply and collect any sputum (cold, "flem") brought the up from your chest.

7. Do not get sputum on the outside of the tube. Fill to the 5 ml. mark.

8. Wrap the lab slip around the Metal can and put them in Cardboard can. Tighten the cap securely.

Return samples to the Health Department the same day.

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SPECIMEN COLLECTION FOR CULTURE OF MYCOPLASMA/UREAPLASMA

Principle:
To properly collect a cervical specimen for the culture of Mycoplasma or Ureaplasma

Patient Preparation:
No special preparation.

Supplies:
1. Sterile cotton-tipped swab
2. Speculum
3. Mycoplasma hominis/Ureaplasma transport medium (sent directly from Virology Section) Call 803-896-0819 to obtain
4. DHEC form 1335

Collection Precautions:
****Wear disposable gloves and protective eyewear when collecting & handling specimens****

Collection Procedure: (Cervical)
DO NOT USE SWABS WITH WOODEN SHAFTS TO COLLECT SPECIMEN
1. Obtain the cervical specimen with the aid of a speculum that has been moistened with water. Other lubricants may contain antibacterial agents.
2. Insert sterile cotton-tipped swab into the endocervical canal approximately 2-3 cm. and swab the cervical OS and the vaginal area. Insert swab into the endocervix only until the cotton tip is no longer visible and rotate gently 10-30 seconds. (Note: if the patient is pregnant, question her about vaginal bleeding or leakage of fluid from the vagina. If either has occurred, DO NOT collect a culture.)
3. Place swab in Mycoplasma/Ureaplasma transport medium after collection. Tightly secure the cap of the transport tube to prevent leakage.

Specimen Handling:
1. Label a tube of Mycoplasma/Ureaplasma transport medium with a patient label.
2. Complete a DHEC 1335 to accompany specimen See instructions on back for completing. Be sure to complete specific test information
   Specimen: Mark "X" in the appropriate space. If "Other" is marked, enter site.
   Date of Onset: Enter month, day and year.
   Symptoms: Mark each symptom that applies. If "Other" is marked, write in symptom(s).
   Test Requested: Mark "X" in the appropriate space.
   Virus Suspected: Enter name of virus suspected i.e. M. hominis, M. urea or both

Specimen Preservation and Transport:
1. If M. hominis is suspected, store in refrigerator and ship with cold packs if specimen will reach the laboratory within six hours. If shipping is delayed beyond 6 hours, freeze at -70°C. and ship on dry ice.
2 If Ureaplasma is suspected, specimen can be kept in the refrigerator for 24-48 hours after collection. Ship cold with cold packs. If shipping is delayed beyond 48 hours, freeze at 70°C and ship on dry ice.
3. See section IV for appropriate shipping container, packaging and transport instructions.

Specimen Rejection:
1. Incorrect collection media used
2. Specimen not cold on arrival
3. Cotton swab with wooden shaft used for collection.
4. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF
ENTEROVIRUS
(STOOL)

Principle:
To properly collect a stool specimen for the isolation of Enteroviruses including Polio, Coxsackie and Echo viruses. Specimens for virus isolation should be collected as early as possible during illness.

Patient Preparation:
No special preparation.

Supplies:
1. Wide-mouthed container.
2. Tongue depressor
3. DHEC form 1335
4. Viral Transport media if collecting rectal swab. See page III-1 to order.

Collection Precaution:
WEAR GLOVES WHEN HANDLING ALL STOOL SPECIMENS.

Collection Procedure (Stool)
1. Collect stool in a clean (not necessarily sterile) wide-mouthed container that can be covered with a tight-fitting lid. These containers should be free of preservatives and detergents.
2. DO NOT COLLECT SPECIMEN FROM TOILET. CONTAMINATION WITH URINE SHOULD BE AVOIDED.
3. Infant specimens may be collected in a disposable diaper with plastic side facing inside.
4. Collect Solid walnut sized piece if stool is formed. Collect 5-10 ml if stool is liquid
5. Place in a dry collection cup. Secure top with tape.
   NOTE: If stool cannot be collected, a rectal swab may be collected. Swab should be placed in viral transport medium

Specimen Handling:
1. Place a patient identification label on the container.
2. Complete a DHEC form 1335 to accompany specimen See instructions on back for completing. Be sure to complete test specific information:
   Specimen: Mark "X" in the appropriate space. If "Other" is marked, enter specimen site.
   Date of Onset: Enter month, day and year.
   Symptoms: Mark each symptom that applies. If "Other" is marked, write in symptom(s).
   Test Requested: Mark "X" in the appropriate space.
   Virus Suspected: Enter name of virus suspected.

Specimen Preservation and Transport:
1. Store in refrigerator and ship cold with cold packs within 24-48 hours after collection
2. If shipping is delayed, freeze at -70^{o}C and ship on dry ice.
2. Transport medium is advantageous for virus isolation from swabs.

Specimen Rejection:
1. Specimen not cold on arrival
2. Calcium alginate swab used for collection of rectal swab.
3. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF

ENTEROVIRUS, OR RESPIRATORY VIRUS OR MUMPS (THROAT SWAB)

Principle:
To properly collect a throat swab for the isolation of Enteroviruses, Respiratory viruses, or Mumps. (Urine is preferred for Mumps culture.)

Patient Preparation:
No special preparation.

Supplies:

1. Sterile cotton or Dacron swab. **Do not use calcium alginate swab**.
2. Viral transport media or Influenza transport media (supplied in Influenza kit during flu season or during an outbreak. Store both transport media in refrigerator until needed.
3. DHEC form 1335

Collection Procedure for Throat Swab:

Collection of a throat washing has been discontinued because of the use of antibiotics in some collection media

1. Shine a bright light if possible over the shoulder of the specimen collector into the oral cavity of the patient so that the swab can be guided to the posterior pharynx.
2. The patient is instructed to tilt his/her head back and breathe deeply.
3. Depress the tongue with a tongue depressor to help visualize the posterior pharynx.
4. Extend the swab to the back of the throat between the tonsillar pillars and behind the uvula.
5. Have the patient phonate a long Aah which will lift the uvula and help to prevent gagging.
6. The tonsillar areas and posterior pharynx should be firmly rubbed with the swab.
7. Care should be taken not to touch the teeth, cheeks, gums or tongue when inserting or removing the swab to minimize contamination with normal mouth flora.
8. Remove swab and immediately place into:
   a. Viral transport media for viruses other than Influenza
   b. Influenza transport media for Influenza

Specimen Handling:

1. Place a patient label on vial of viral transport media.
2. Complete a DHEC form 1335 to accompany specimen See instructions on back for completing. Be sure to complete test specific information:
   Specimen: Mark X in the appropriate space. If Other is marked, enter specimen site.
   Date of Onset: Enter month, day and year.
   Symptoms: Mark each symptom that applies. If Other is marked, write in symptom(s).
   Test Requested: Mark X in the appropriate space.
   Virus Suspected: Enter name of virus suspected.

Specimen Preservation and Transport

1. Store and ship viral transport tubes cold with cold packs within 24-48 hours after collection.
2. Store and ship Influenza transport tubes at room temperature
3. See Section IV for appropriate shipping container, packaging and transport instructions.

Specimen Rejection

1. Use of calcium alginate swabs.
2. Specimen not cold on arrival (if in Viral transport media)
3. Universal rejections, see Section I

SPECIMEN COLLECTION FOR CULTURE OF
HERPES SIMPLEX

Principle:
The purpose of performing a herpes culture on a genital lesion or cervical/vaginal culture is to diagnose infection with the herpes simplex virus. A positive result is conclusive for diagnosis; however, a negative result does not exclude the diagnosis of herpes. Specimens taken from vesicular fluid are approximately 95% culture-positive; from pustular lesions, 70-85% culture-positive; from ulcers, 70% culture-positive; while only 25% of crusted lesions contain recoverable virus. The duration of viral shedding from ulcerative lesions is longer in first episodes than in recurrent episodes of genital lesions.

Patient Preparation:
No special preparation.

Supplies:
1. Sterile cotton-tipped swabs with plastic shafts
   Do Not Use Calcium Alginate Swabs as Herpes Simplex Virus Is Inactivated upon Storage in the Presence of Calcium Alginate.
2. Sterile saline (optional)
3. Tuberculin syringe with a 26-gauge needle
4. Viral transport media. See Page III-1 to order. Store media in refrigerator until needed.
5 DHEC form 1335

Collection precautions:
Wear disposable gloves and protective eyewear when collecting and handling specimens.

Collection Procedure: (Genital Lesions, Vesicles and /or Ulcers)
1. Clean the surface of the lesion with sterile saline if available or with tap water to remove any contaminating materials such as body fluids, excreta or drainage.
2. Specimens should be obtained from active lesions, which include ulcers and vesicular lesions. The younger the lesions, the better likelihood of obtaining a positive culture.
3. If the lesions are vesicular in nature, the fluid contained in the lesions can be withdrawn with a tuberculin syringe. The fluid can then be placed into Viral Transport media.
4. For vesicles that are intact, open with a sterile cotton-tipped swab.
5. Vigorously rub a sterile cotton-tipped swab over the base and margins of the lesion. Obtain vesicular fluid as well as material from the base and margins.
   Since Herpes viruses are obligate intracellular pathogens, the best way to obtain virus is to collect infected cells which would be present at the base and margins of the lesion.
6 Place the swab into transport medium, and break off the end of the swab shaft and leave the swab inside the medium.
7 Recap the medium transport tube tightly to prevent leakage during shipment and refrigerate until it is sent to the Bureau of Laboratories.

Collection Procedure: (Cervical)
1. Obtain the cervical/vaginal specimen with the aid of a speculum that has been moistened with water.
2. Insert the speculum and if unable to visualize the cervical OS, remove excess mucus with a large cotton-tipped swab.

3. Moisten a sterile cotton-tipped swab with transport media and insert the swab into the endocervical canal approximately 2-3 cm and swab the cervical OS and the vaginal area. (NOTE: If the patient is pregnant, question her about vaginal bleeding or leakage of fluid from the vagina. If bleeding or leakage has occurred, DO NOT culture and refer patient to MD. If no bleeding or leakage has occurred, insert swab into the endocervix only until the cotton tip is no longer visible and rotate gently 10-30 seconds).
4. Remove the swab and place it into Viral transport medium.
5. Rotate the swab in the medium to elute the specimen.
6. Break the swab shaft off and recap the medium tightly to prevent leakage
7. Refrigerate transport media until transported to the Laboratory.

Specimen Handling:

1. Label the transport tube containing swab with a patient label.
2. Complete a DHEC form 1335 to accompany specimen. See instructions on back for completing. Be sure to complete test specific information
   Specimen: Mark "X" in the appropriate space. If "Other" is marked, enter specimen site.
   Date of Onset: Enter month, day and year.
   Symptoms: Mark each symptom that applies. If "Other" is marked, write in symptom(s).
   Test Requested: Mark "X" by Herpes culture.
   Virus Suspected: Enter Herpes

Specimen Preservation and Transport:

Do not freeze at –20 ºC. The Herpes virus is sensitive to freezing at this temperature.

1. Place transport tube in a biohazard bag and pack with cold packs in a Styrofoam cooler. Transport within 24-48 hours after collection. If shipping is delayed or a prolonged transit time is anticipated, specimen should be frozen at -70ºC and shipped on dry ice.
   The herpes virus is relatively unstable and is adversely affected by heat and drying. The titer of virus falls progressively if the transport media reaches room temperature.

Specimen Rejection:

1. Calcium Alginate swab used for collection
2. Specimen not cold on arrival
3. Universal rejections, see Section I

SPECIMEN COLLECTION FOR DETECTION OF
HIV-1
ORASURE PROCEDURE

Principle:
To properly collect an oral fluid specimen for the detection of HIV-1.

Patient Preparation:
Have the patient rinse his or her mouth with water prior to collection to avoid food particles or bleeding gums.

Supplies:
1. One cotton fiber Collection Pad on a nylon stick
2. One Specimen Vial containing Preservative solution.
3. DHEC Form 1332

Collection Procedure:
1. Peel open Collection Pad package far enough to allow for easy removal. Without touching the contents, present the stick to the test subject and ask them to pull it out of the protective sleeve.

2. Instruct patient to place pad between lower cheek and gum and rub back and forth gently until moist.

3. Instruct patient to keep the pad in place for 4 minutes (5 minutes maximum), and begin timing.

4. Remove the Specimen Collection vial from the package and record test subject identification and date of collection.

5. Open vial in upright position (cap up, pointed tip down) by rockin the cap back and forth gently to avoid spilling the contents; give tl opened Specimen Vial to the patient, and have them insert the pad the way to the bottom of the vial.

6. Instruct the patient to break the pad handle by snapping it agains side of the vial and return the vial to you.

7. Replace the cap with a snap.

8. Place the Specimen Vial into the sealable bag. Seal the bag and forward to the Bureau of Laboratories for analysis. Take care to avoid extreme changes in temperature after collection of the sample prior to shipment.

SPECIMEN COLLECTION FOR
BORDETELLA PERTUSSIS
DETECTION BY PCR AND/OR CULTURE

Principle:
To properly collect nasopharyngeal swabs for the detection of *Bordetella pertussis* by PCR. and for culture of the organism.

I. PCR:

Collection Kit* will contain:

2 nasopharyngeal swabs with **Dacron polyester** tips for PCR
1 tube for PCR
1 Request Form (DHEC 1335)
1 instruction sheet

Instructions for collection of NP specimens:

1. Insert a thin swab with a flexible wire into the right nare. The swab is introduced flat and then pushed forward with gentle downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. The swab is rotated for a few seconds before it is gently withdrawn. Note: Throat swabs are not acceptable.
2. Place the swab into the tube for PCR.
3. Repeat steps 1 and 2 for the left nare. Label the tube with the patient's name.
4. Complete 1 Bacteriology Request Form (DHEC 1335) to accompany the tubes. Include patient information, date collected, sender name and number, and mark the following boxes:
   Specimen Site: Mark "X" in 052 (NP) box
   Organism Suspected: *Bordetella pertussis*
   For PCR requests: Write *Bordetella pertussis* PCR in the **Organism Suspected** box

If the patient has had antibiotic treatment, please note the drug and when treatment started.

5. Transport the PCR swabs on a cold pack in an insulated, crush-proof container. Be sure to include the request form. Send to the attention of Molecular Epidemiology.
6. Specimen Preservation and Transport: If shipping is delayed, the PCR tubes can be stored at 4^{o} C. for 24-48 hours.

II. Culture**

Collection supplies needed:

2 nasopharyngeal swabs with **Dacron polyester** tips.
1 tube of Regan-Lowe transport medium***
1 Request Form (DHEC 1335)
Instruction sheet

Instructions for collection of specimens:

1. Insert a thin swab with a flexible wire into the right nare. The swab is introduced flat and then pushed forward with gentle downward pressure on the lower nasal floor to the posterior wall of the nasopharynx. The swab is rotated for a few seconds before it is gently withdrawn. Use a second flexible wire swab in the same manner to sample the nasopharynx through the left nare.
2. Immediately immerse both swabs into a tube of Regan-Lowe transport medium and tighten the screw cap. The wire shaft of the swab can be bent so that it will fit into the tube. **Note: Regan-Lowe must be at room temperature before the tubes are inoculated.** Write the patient's name on the tube.

3. Complete a Request Form (DHEC 1335). Include patient information, date collected, sender name and number, and mark the following boxes:
   Specimen site: Mark 52 Nasopharyngeal Swab
   Organism Suspected: *Bordetella pertussis*.
   Test requested: Mark "X" 510 for culture.
   Please indicate any antibiotic therapy the patient has received.
4. Place Regan-Lowe transport medium and request form into a double walled mailing container. Address to the attention of Bacteriology. Transport at **room temperature** for overnight delivery to the BOL by the DHEC courier. If shipping is delayed, the Regan –Lowe tube can be incubated at 35^{o} C for 24-48 hours.

*For information on submitting specimens for PCR, please contact the DHEC Molecular Epidemiology Laboratory at (803) 896-0824. For kits, please contact the DHEC BOL Materials Logistics Section at (803) 896-0913.

** For information on submitting specimens for culture, please contact the DHEC Bacteriology Laboratory (803) 896-0805.

*** For Regan-Lowe transport medium, please contact the DHEC Media/Reagent Section (803) 896-0817.

SPECIMEN COLLECTION FOR
CYTOLOGIC EVALUATION
BREAST SMEAR

Available only to DHEC County Health Department Clinics

Principle:

These smears are used for the detection of pre-malignant and malignant changes of the breast. This is an effective method for dealing with breast secretions (nipple discharge).

Supplies:

All except the pencil and rubber bands can be obtained from the Bureau of Laboratories
See page III-1 to order

1. Frosted end slide
2. Cyto-spray fixative
3. DHEC form 1362, GYN Cytology request form
4. Cardboard Slide mailer
5. Pencil and rubber bands

Collection Procedure

Drops of fluid from the nipple are smeared directly on clean glass slides and fixed immediately with spray fixative.

1. Label the frosted end of a slide with patient's name, ID number, collection date and indicate whether right or left breast.
2. Obtain drops of fluid from the nipple and smear them directly on the clean, labeled slide Repeat for second breast if applicable.
3. Fix immediately with spray fixative
4. After slide(s) are fixed they should be air-dried for about ten minutes before being packaged for transport

Specimen Handling:

Place slide(s) in cardboard slide mailer, close and secure mailer with several rubber bands.

Specimen Packaging and Transport:

1. Store and ship at room temperature
2. Fixed slides are considered non-hazardous, and do not require special packaging. Package to protect against breakage.

Specimen Rejection:

1. Slides not fixed, or improperly fixed
2. Universal rejections, see Section I

SPECIMEN COLLECTION FOR
CERVICAL/ENDOCERVICAL
PAP SMEAR

Principle:
To properly obtain a sample of cells from the cervix (Papanicolaou smear) to detect cervical cancer, its precursors, and other abnormalities of the reproductive tract.

Supplies

All except the speculum can be obtained from the Bureau of Labs. See pg III-1 to order.

1. Sterilized or single-use disposable bivalve speculum:
2. Plastic collection spatula, brush and/or "broom"
3. One glass slide with one frosted end
4. Cardboard slide mailer
5. DHEC form 1362, GYN Cytology request form

Patient Preparation:
Preferably, the woman should be tested 2 weeks after the first day of her last menstrual period and **definitely not when she is menstruating.** Women should not use vaginal medication, vaginal contraceptives, or douches during the 48 hours before the appointment. Intercourse is not recommended the night before the examination.

Collection Precautions:
Cytological specimens should be considered infectious until fixed with a germicidal fixative. **OBSERVE UNIVERSAL PRECAUTIONS WHEN COLLECTING AND HANDLING SPECIMENS**

Collection Procedure:

1. **Position of the Patient:**
   Although it is possible to perform cervical cytology sampling with the patient in a variety of positions, in the United States it is usually performed with the patient in the dorsolithotomy position.
2. **Preparation of the Cervix**:
   Once the patient is positioned, a sterilized or single-use disposable bivalve speculum of appropriate size should be gently inserted into the vagina, avoiding direct pressure on the sensitive anterior structures (e.g., urethra).Water may be used to lubricate and warm the speculum; however, lubricant jellies should not be used. Several sizes of specula should be available so that an appropriate device may be chosen for the patient. Very young patients, patients with little sexual experience, and elderly patients with vaginal atrophy require the use of a smaller, narrower speculum that women who are sexually active. The speculum must be positioned so that the entire face of the cervix appears at the end of the instrument because a sample from this area is necessary for adequate specimen collection. A large, cotton-tipped swab is often useful for helping to position the cervix.
   It is important to obtain a smear that is not obscured by blood, mucus, or inflammatory exudate. Following correct positioning of the speculum in the vagina if there is excess mucus or other discharge present, it should be gently removed with ring forceps holding a folded gauze pad or large, cotton-tipped swab. Inflammatory exudate may be removed by placing a dry 2 X 2-inch piece of gauze over the cervix and peeling it away after it absorbs the exudate, or by using a dry proctoswab or scopette.The cervix should not be cleaned by washing with saline as it may result in a relatively acellular smear. The sample should be obtained before the application of acetic acid.

3. Collection site:

Visual inspection of the lower genital tract and cervix through the speculum is a prerequisite to optimal sample collection. Squamous epithelium of the ectocervix has a smooth, pearly, opaque appearance.. Native columnar epithelium of the endocervix is slightly reddish with a "cobblestone" surface. The transformation zone (where native endocervical columnar epthelium has undergone conversion to "immature" metaplastic squamous epithelium) has an intermediate, variegated appearance. (See figure 1.)

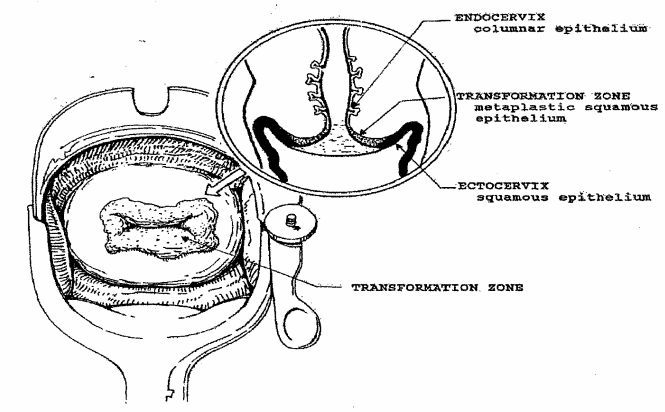
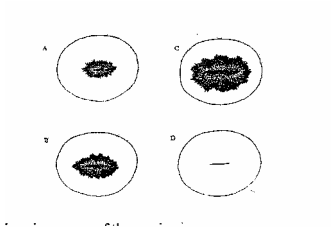


Figure 1. View of the cervix through the speculum

The location and configuration of the active transformation zone is variable, depending on several factors such as vaginal pH, pregnancy, hormonal milieu, menopause, prior therapy, and individual anatomy. The upper (endocervical) limit of the transformation zone is dynamic, defined by the leading edge of the migratingsquamo-columnar junction. In post-menopausal women, the squamo-columnar junction is often high in the endocervical canal and no longer visible. (See Figure 2.)

Figure 2:Variations in cervical mucosa

A. Narrow transformation zone
B. Broader transformation zone
C. Broadly everted transformation zone- parous type.
D. Squamo-columnar junction high in Endocervical canal-postmenopausal or post-treatment type



An optimal cervical specimen includes sampling of the squamous and columnar epithelium, encompasing in particular the transformation zone where the majority of cervical neoplasias arise. The specific sampling instrument(s) and sampling technique used should be based on a consideration of individual patient anatomy, particularly the location and configuration of the transformation zone as determined by visual inspection. The method detailed below outlines a collection technique using a combination of wooden or plastic spatula and cervical brush instruments.

4. Collection Procedure Using Wooden or plastic spatula and Cervical Brush*

(a) **Slides should be labeled before the smear is obtained.**

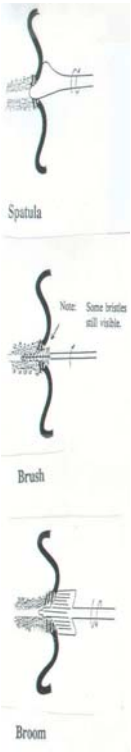
Label frosted end of the glass slide with the patient's first and last name, as well as date of birth, using a diamond or hard (#3) lead pencil. (inks tend to run in processing.) If the specimen consists of more than one slide, it is mandatory that the source of the specimen be indicated.

(b) **Observe universal precautions for collecting and handling specimens** Insert the speculum, which may be *slightly* moistened with water or saline. No other lubricants should be used.

(c) Visually identify the cervix, and the transformation zone, if visible, and direct sampling efforts to encompass this area. **Note:** If an elevated, ulcerated, necrotic, or exudate-covered lesion is observed, arrangements should be made for <u>biopsy</u> following cytology sampling.

(d) Choose the contoured end of the spatula that best conforms to the anatomy of cervix in the transformation zone. Rotate spatula at least 360º about circumference of the Cervical os and ectocervix, while maintaining firm contact with the epithelial surface.

Note: A clockwise rotation beginning and ending at 9 o'clock (or counter-clockwise rotation from 3 o'clock to 3 o'clock) will position the spatula so that the collected material is retained on the upper horizontal surface as the instrument is removed.



Do <u>not</u> smear the sample at this time unless the specimen is to be immediately fixed (see 3-B) Hold the spatula between the fingers of the nonsampling hand (or rest it on the glass slide) with the specimen face-up, while the cervical brush material is collected without delay.

(e) Insert the cervical brush into the os: Some bristles should still be visible. This will minimize inadvertent sampling of the lower uterine segment. With *Gentle* pressure, rotate the brush only 90 to 180 ° to minimize bleeding..

Note: Brushes have circumferential, radiating bristles that come in contact with the entire surface of the os upon insertion. This is in contrast to the edge of a spatula which is in contact with only a fraction of the epithelial surface at any one time. Therefore, the brush need only be rotated one quarter turn (90°) while the spatula must be rotated at least one full turn (360°).

*The use of both instruments is recommended for optimal sampling. The preferred order of spatula and brush sampling has not been subjected to large scale studies. Obtaining the spatula specimen first diminishes the possibility of blood contamination due trauma by the brush. However, some speculate that performing the brush collection first may increase the yield of exfoliated abnormal cells by the spatula. One option is to sample the ectocervix twice, both before and after obtaining the endocervical brush specmen.

Above figure: The solid black area represents mature squamous epithelium, the hatched area represents the transformation zone, and the stippled area the original endocervical zone

Prepare Smears:

The object is to quickly but evenly spread the cellular material in a thin layer on the glass slide. Thin out large clumps of material as much as possible, while avoiding excessive manipulation, which can damage cells. To avoid the development of air-drying artifact, transfer the material from both sampling instruments to the material from both sampling instruments to the slide within a few seconds and fix <u>immediately.</u>

1. To transfer material from the spatula, smear the sample with a single stroking motion using moderate pressure to thin out clumps of cellular and mucus material. Avoid excessive force or manipulation, which will damage cells.

2. To transfer material from the brush, roll the bristles across the slide by twirling the brush handle.

3. To transfer material from the broom, smear the sample with a painting action, using both sides of the broom.

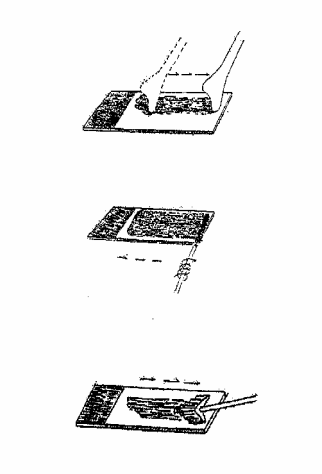


Figure 4. Transferring the sample to the slide

4. Smearing option A
   Smear the spatula sample across the slide:
   Roll the brush directly over top and **Fix immediately**.
   (with this method, the ability to localize the origin of the cells may be lost.)

5. Smearing option B
   Spread the spatula sample over the left side of the slide, cover the right-hand side with cardboard, and immediately spray fix
   Roll the brush material onto the right-hand side of the slide and immediately spray fix
   Note: With this method, the spatula specimen may be spread and fixed before obtaining the endocervical brush sample.

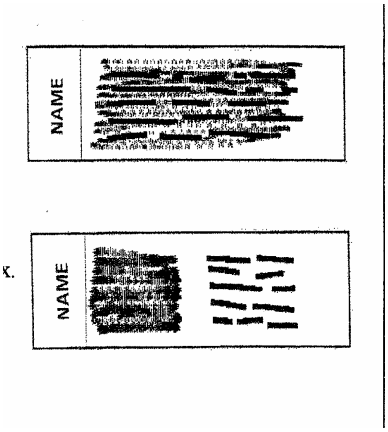


Figure5.Options for transferring the samples to glass slides

Fix smears

After the specimen has been spread evenly on the slide, the slide should be fixed immediately.
Fixatives are agents that are used on gynecologic smears to prevent cell distortion and to maintain true morphologic structure. Distortion due to improper fixation nearly always prevents proper and accurate evaluation of the cell population. Air drying is the absence of fixation. Air drying produces artifacts and cellular distortion and may lead to misinterpretation of smears. Air drying of a Pap smear is **NOT** recommended.

1. **Cytofixative spray is the recommended fixative and is provided upon request**
   Hold the nozzle of the cytofixative spray can approximately 12 inches from the slide, and apply an even coat to cover the smeared area. Holding the spray fixative container too close to the slide can result in the development of cellular artifacts, while holding the container too far from the slide may result in drying artifacts or uneven fixation Holding the spray fixative too close to the slide can also result in flooding the slide and washing or blowing away the cells.

   The use of commercially available hairspray is a common practice in some parts of the country. Use of this material is absolutely discouraged because of the variability in the ingredients.(These cosmetic aerosols may result in a very poor specimen preservation.)

2. Alternative Wet Fixation with 95% ethanol
   A widely accepted, ideal cellular fixative for gynecologic/cytologic smears is 95% ethanol. Place 95% ethanol in an appropriate container and immerse the freshly prepared smear immediately into the fixative. Fixation occurs in 5 to 30 minutes. If the fixative is to be reused, it should be filtered.

Specimen Handling

1. A**llow slides to dry completely before packaging for transport.**
2. Complete a DHEC form 1362 to accompany the specimen See general instructions for completing, Pg III-3. Be sure to complete specific test Information.
   Date of collection
   Date of LMP
   Specimen source
   Provider code

Specimen Transportation:

1. Place properly labeled slides in cardboard slide mailer transport to prevent breakage.
2 Fixed slides are considered non-hazardous and do not require special precautions while transporting.

Specimen Rejection:

1. Smears improperly prepared or fixed
2. Universal rejections, see Section I

SPECIMEN COLLECTION FOR DETECTION OF

CHLAMYDIA/GC

GEN-PROBE APTIMA COMBO 2 PROCEDURE

Principle:

To properly collect a specimen for the detection of *Chlamydia trachomatis* and/*or Neisseria gonorrhoeae.*

Patient Preparation:

See collection procedures below

Supplies:

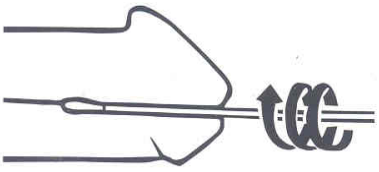
1. GC/ Chlamydia Gen-Probe supplies See page III-1 to order.
2. Unisex Collection Kit. Use blue swab only for collecting both male and female specimens.
3. DHEC form 1332

Collection Procedure for Endocervical Swab Specimens:

1. Remove excess mucus from cervical os and surrounding mucosa using cleaning swab (white shaft swab in package with red printing). **Discard this swab.**
2. Insert specimen collection swab (blue shaft swab in package with green printing) into endocervical canal.
3. Gently rotate swab clockwise for 10 to 30 seconds in endocervical canal to ensure adequate sampling.
4. Withdraw swab carefully; avoid any contact with vaginal mucosa.
5. Remove cap from swab specimen transport tube and immediately place specimen collection swab into specimen transport tube.
6. Carefully **break swab shaft at scoreline**. Use care to avoid splashing contents.
7. Re-cap swab specimen transport tube tightly**.**
8. See Specimen Transport and Storage below.

Collection for Male Urethral Swab Specimens:

Patient should not have urinated for at least 1 hour prior to collection.



1. Insert specimen collection swab (blue shaft swab in package with green printing) 2-4 cm into urethra.
2. Gently rotate swab clockwise for 2 to 3 seconds in urethra to ensure adequate sampling.
3. Withdraw swab carefully
4. Remove cap from swab specimen transport tube and immediately place specimen collection swab into specimen collection tube.
5. Carefully **break swab shaft at scoreline**. Use care to avoid splashing contents.
6. Re-cap swab specimen transport tube tightly.
7. *See Specimen Transport and Storage below.*

Collection for Male and Female Urine Specimens

Patient should not have urinated for at lease 1 hour prior to specimen collection.

1. Direct patient to provide first-catch urine (approximately 20 to 30 ml of initial urine stream) into urine collection cup free of any preservatives. Collection of larger volumes of urine may result in specimen dilution that may reduce test sensitivity. Female patients should not cleanse labial area prior to providing specimen.

2. Remove cap from urine specimen transport tube and transfer 2 ml of urine into urine specimen transport tube using disposable pipette provided. The correct volume of urine has been added when fluid level is between black fill lines on urine specimen transport tube label.
3. Re-cap urine specimen transport tube tightly. This is now known as the "processed urine specimen."
4. See *Specimen Transport and Storage* below.

Specimen Handling:

Complete DHEC form 1332 to accompany specimen
See instructions on back for completing.
.Be sure to complete test specific information**.**

Specimen Preservation and Transport

A. Swab

1. After Collection, transport and store swab in swab specimen transport tube at 2°C to 30°C until tested.
2. Specimens must be assayed with the GEN-PROBE APTIMA Combo 2 Assay within 60 days of collection. If longer storage is needed, freeze at -20°C to -70°C for up to 90 days after collection.

B. Urine

1. After collection, transport the processed urine specimens in the GEN-PROBE APTIMA Combo 2 Assay urine specimen transport tube at 2°C or 30°C and store at 2°C or 30°C until tested. Processed urine specimens should be assayed with the APTIMA Combo 2 Assay within 30 days of collection. If longer storage is needed, freeze at -20°C -or-70°C for up to 90 days after collection.
2. Urine samples that are still in primary collection container must be transported to lab at 2°C or 30°C. Transfer urine sample into APTIMA Combo 2 Assay urine specimen transport tube within 24 hours of collection. Store at 2°C or 30°C and test within 30 days.
3. See section IV for appropriate shipping container, packaging and transport instructions

Specimen Rejection:

1. No swab in tube, 2 swabs in tube, or improper(non blue) swab used
2. Specimen other than urine or genital
3. Universal rejections, see Section I

Note: Specimens collected with this system cannot be used for culture. Only swabs supplied with the Gen-Probe specimen collection system should be used for specimen collection.

SPECIMEN COLLECTION FOR
OVA AND PARASITES

Principle:
To properly collect a stool specimen for the detection of intestinal parasites such as Giardia, Cryptosporidia, Microsporidia, Cyclospora, or helminth eggs and larvae i.e. Ascaris, hookworms, tapeworms.

Patient Preparation:
No special Preparation

Supplies:
1. Parasitology kit (O & P) See page III-1 to order.
   Note: This kit will not allow detection of trophozoites.
2. PVA preservative for liquid stools and detection of trophozoites (Not provided)
3. DHEC form 1335
4. 10% formalin (recommended for parasites such as Cyclospora) (Not provided)

Collection Procedure:
Refer to diagram that follows.
1. Have patient produce a bowel movement in a clean wide-mouthed container or on a clean paper. DO NOT COLLECT SPECIMEN FROM TOILET.
2. Infant specimens may be collected in a disposable diaper by turning the diaper inside out with the plastic side facing the skin. Specimens collected on the absorbent side are not acceptable.
3. Fill plastic tube ½ full with feces. Screw cap on tightly.
   If using PVA or 10% formalin, place feces in preservative immediately after collection.
   Most commercially prepared preservatives have a "fill line" on the container to indicate the quantity required. Follow manufacturer's instructions.

Specimen Handling:
1 Place a patient identification label on the outside of the plastic tube.
2. Place plastic tube into the metal can. Screw cap tightly.
3. Complete a DHEC form 1335 to accompany specimen See instructions on back for completing. Be sure to complete test specific information:
   Organism Suspected: Indicate organism suspected.
   Test requested: Mark X in the appropriate space.

Specimen Preservation and Transport:
1. Wrap request form around the metal can containing the specimen. Place both into the cardboard container. Screw cap tightly.
2. Store and ship at room temperature to arrive within 4 days after collection.
3. See section IV for appropriate shipping container, packaging and transport instructions

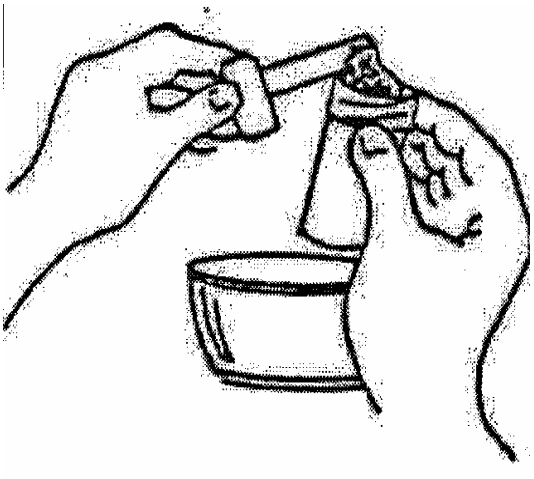
Specimen Rejection:
1. Specimen contaminated with urine or water, laxatives or barium
2. Specimen covered in fungal growth
3. Specimen more than 4 days old
4. Universal rejections, see Section I

STOOL COLLECTION FOR OVA AND PARASITES

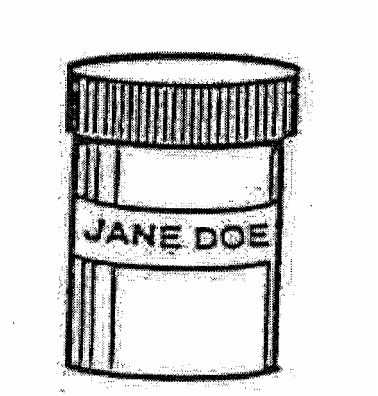
This kit is for detection of cyst forms. Detection of trophozoites requires submitting the specimen in a preservative such as PVA (polyvinyl alcohol). Liquid stools are more likely to contain trophozoites and should be submitted in a preservative.

1. **Have patient produce a bowel movement (number two) in a clean container or on a newspaper.**

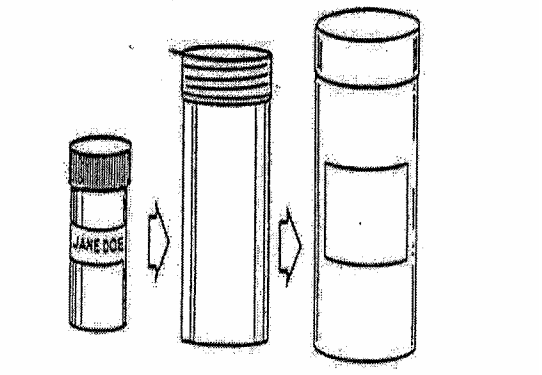
2. **Fill the plastic tube ½ full with bowel movement. Screwcap on Tightly.**



1. **Print patient's name on the label of the plastic tube. Please keep outside of the tube clean.**



4. **Put plastic tube into the metal can. Screw cap tightly. Wrap the request form around the metal can. Place both into the mailing container**



5. **Return the kit to the Health Department as soon as possible or bring to the Bureau of Laboratories at 8231 Parkland road, Columbia, SC. Specimens more than 2 days old may not yield accurate results.**

SPECIMEN COLLECTION FOR
PINWORM PREP

Principle:
Diagnosis of Pinworm infection can be confirmed by the demonstration of *Enterobius vermicularis* ova in the perianal area.

Patient Preparation:
No special preparation.

Supplies:
1. Pinworm Prep. Slide
2. Cellulose (scotch) tape strip. Use clear tape. ***Do Not use frosted tape.***
3. Clean microscope slide
4. Tongue depressor
5. Slide label
6. Slide mailing container
7. DHEC form 1335

Slide Preparation:
Place strip of cellulose tape to cover slide, folding back approximately ½ inch piece on one end to form a tab.

Collection Procedure:
Best time for collection is a few hours after retiring, first thing in the morning before bowel movement or both. Therefore, collection is usually done at home.

1. Instruct patient or parent in collection procedure. (See illustration that follows.)
   Give prepared slide, collection diagram and mailing container to patient or parent
2. Instruct patient/parent on packaging and shipping of specimen to the laboratory.

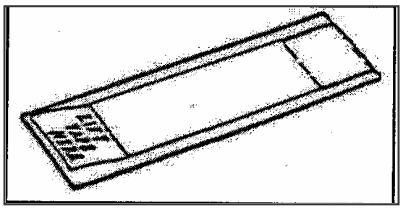
Specimen Handling:
1. Label slide with patient's name
2. Complete DHEC form 1335, to accompany specimen
   See instructions on back for completing
   Be sure to complete specific test information:
   Reason for test: Mark X in the appropriate box
   Test required: Mark X in the appropriate space

Specimen Preservation and Transport:
1. Place slide(s) in cardboard slide mailer
2. Secure mailer with rubber band and place in biohazard bag
3. Store and ship at room temperature.
4. See section IV for appropriate shipping container, packaging and transport.

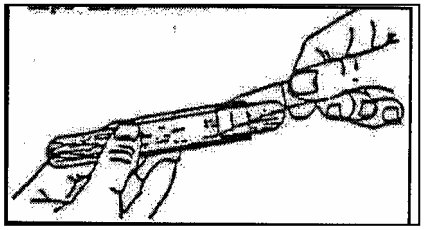
Specimen Rejection:
1. Frosted tape used
2. Universal rejections, see Section I

PINWORM PREP

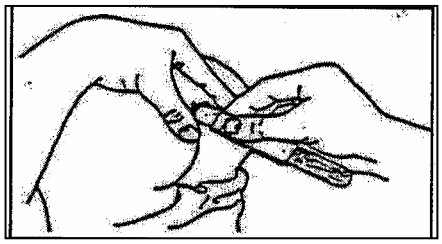
Use of cellulose tape slide for pinworm collection



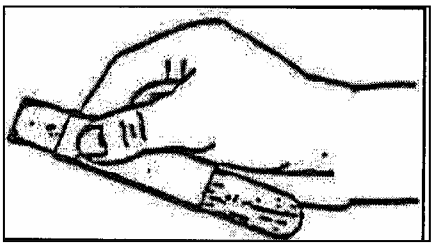
1. Cellulose-tape slide preparation



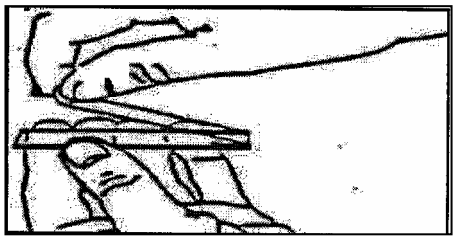
2. Hold slide against tongue depressor one inch from end of depressor.
   Lift tape from slide



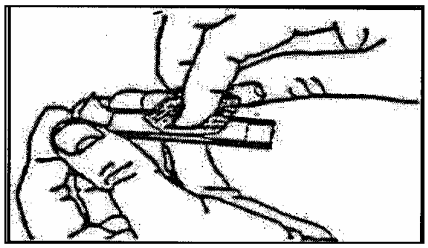
3. Loop tape over end of tongue depressor sticky side out and press tape to anal region to cover as much of the perianal area as possible



4. Hold tape and slide against tongue depressor



5. Loosen end of tape from end of depressor and press tape onto slide, sticky side down
   Apply the tape so as to prevent trapping air bubbles between tape and slide



6. Use cotton or gauze to smooth tape down

Note: Best time for collection is a few hours after retiring (10 or 11 pm) or first thing in the morning before bowel movement.

SPECIMEN COLLECTION OF
SKIN SCRAPINGS FOR SCABIES

Principle:
Diagnosis of scabies can be confirmed by demonstration of the mites, eggs or scybala (fecal pellets). Because the mites are located under the surface of the skin, scrapings must be taken from the infected area.

Supplies:
1. Mineral oil
2. Sterile scapel blade
3. Clean glass slide and coverslip
4. Applicator stick
5. DHEC form1335
6. Cardboard slide mailer (holds 2 slides)
7. Biohazard bag

Safety Precautions:
Specimens must be handled with care**. *Sarcoptes scabei* is highly contagious. Wear gloves and lab coat while collecting specimens.**

Collection Procedure:
1. Place a drop of mineral oil on a sterile scalpel blade. (Mineral oil is preferred over potassium hydroxide solution or water. Mites will adhere to the oil and oil will not dissolve fecal pellets).
2. Allow some of the oil to flow onto the papule.
3. Scrape vigorously six or seven times to remove the top of the papule. (There will be tiny flecks of blood in the oil).
4. Transfer the oil and scraped material to a glass slide. (An applicator stick can be used).
5. Add **one or two drops** (no more than 2) of mineral oil to the slide and stir the mixture.
6. Place a cover slip on the slide.

Specimen Handling:
1. Place a patient identification label on the edge of the glass slide
2. Complete DHEC form 1335 to accompany specimen. See instructions on back for completing.

Specimen Preservation and Transport:
1. Place slide(s) in cardboard slide mailer. or plastic slide box (not supplied)
2. Secure mailer with rubber band and place mailer in Biohazard bag.
3. Store and ship at room temperature
4. See section IV for appropriate shipping container, packaging and transport instructions.

Specimen Rejection:
1. Too much oil used (more than 2)
2. Universal rejections, see Section I

URINE DRUG SCREEN
SPECIMEN COLLECTION AND
CHAIN-OF-CUSTODY PROTOCOL

Principle:
To properly collect a urine specimen for forensic urine drug testing
A chain-of-custody (COC) protocol must be maintained for the urine specimens. Chain-of-custody is a protocol used to certify that a sample has not been compromised.

Supplies:
1. Collection Containers w/lids
2. Security Tapes
3. Permanent Ink Marking Pens
4. Temperature Strips
5. Tamper-proof Bio-Hazard Bags
6. Integrity Seals
7. Mailing label for outside of box
8. DHEC form 1310, Forensic Urine Drug Testing (chain of custody)

Collection Preparation:
1. Complete DHEC form 1310, Forensic Drug Testing (blue) to accompany each specimen. All patient and sender information on the top half of the form (except the temperature box) as well as the Patient History box must be completed by the collector **prior to specimen collection** See general instructions for completing, page III-3. Be sure to complete Test specific information and Patient history.
   Date and time specimen collected
   Type of Specimen. Mark X in appropriate box. **Medical** samples are not automatically confirmed. The client must request this confirmation testing.
   Reason for Test: Mark X in appropriate box.
   Test Requested: Mark X in appropriate box.
   Patient History: List any medications (prescription and over the counter) the donor is currently taking or has taken in the past 2 weeks. **Inform the donor that this information is voluntary.**
2. Write Donor's name (must exactly match name on form) and date collected on the side of the collection cup. **It is not necessary to write anything on the lid.**

Collection Procedure:
1. Prepare toilet area: Remove all chemicals or cleaning supplies from the collection area
   Tape flush handle of toilet and any water faucets in area closed.
   Put dye or food coloring in toilet bowl (Red preferred)
2. Instruct donor that they will not be allowed to carry any personal items into the collection area.
3. Attach a temperature strip on the side of the collection container near the base.
   Give container, but NOT the lid, to the donor and instruct donor to provide at least 30 ml. of urine. Any specimen of less than 30 ml. will be rejected for Chain-of-Custody. If donor cannot provide the minimum quantity, the specimen will be discarded and the donor will be required to provide another specimen later using a clean container. Donor may be allowed to drink fluids to stimulate urine production.
4. The donor must return the container with specimen to collector within 4 minutes collection.

Specimen Handling
****The Collector & the Donor Must Keep the Specimen in View at All Times****
1. The collector will close the container **in the presence of the donor** by tightly screwing the lid in a clockwise direction. Be sure lid is not canted to prevent leakage during transport.

Urine Collection for Drug Screen, Page 2 of 2

2. Collector will note the Temperature (green area on specimen collection temperature strip) and complete the Temperature box of the request form. **It is critical to check the temperature of the specimen within 4 minutes from collection.**
   a. Mark X to indicate if temperature was read within 4 minutes
   b. Mark X in Yes box if temperature is within acceptable range(90.5 to 99.8ºF). If the temperature of the urine is not within this range, it is not acceptable and another specimen must be collected immediately.
   c. Record the actual temperature. (not required but is used for informational purposes)
3. Collector will seal the container in the presence of the donor with security tape and both must initial the tape. Be sure that tape has collection date. Do not cover the writing on the side of the container. One unbroken strip over the top and down the sides of the container is sufficient to maintain COC requirements.
4. Donor must review the testing form for accuracy of information. If there is an error it will be corrected as follows:
   a. Information entered by collector will be corrected by collector. Information entered by donor will be corrected by donor.
   b. Mark through the incorrect information with **ONE single line**. Date and initial the marked thru line. Insert the correct information above or to the side of the marked thru line.
5. The collector should then read the certification statement to the donor and have him/her place his/her signature and the current date on the line marked "Donor Signature and Date". The collector should sign his/her name on the line marked "Collector's name and Date. **If the form is missing either signature or date, the specimen must be rejected.**
6. After completing this section, give the donor the back copy (part 4, donor copy) and remind donor to retain it in a secure place for their files.
7. Place the specimen into the smaller pouch of the Tamper-proof biohazard bag. Seal the bag before the donor leaves.
8. At this point, collection is complete and **Donor is free to leave.**

Failure to comply with the above protocol will result in loss of Chain-of Custody verification. The specimen will be tested as a NON chain-of custody specimen.

Specimen Preservation and Transport:

1. Place a paper towel and specimen into the bio-hazard bag to absorb any leakage.
2. Tear off the original and first copy of the DHEC 1310 form, fold and place inside the outside pocket of the bio-hazard bag. **Do not place the form inside the bag with specimen**. The remaining copy is for the employer (collector) to keep.
3. Use the smallest box which will accommodate the number of specimens you are transporting. Place the specimen(s) into the shipping container with newspaper or paper towels around the bio-bag(s) to minimize movement of specimens during transport.
4. Seal the shipping container with tape, stretching it across the top of the two flaps and extending down sides of box.
5. Place Toxicology label and Integrity Seals (yellow labels) on the outside of the shipping box so they bridge the two flaps of the shipping container.
6. **DO NOT use a biohazard sticker on the outside of the shipping container.**
7. Transport at room temperature.

Specimen Rejection:

1. Specimen volume is not at least 30 ml.
2. Form is not filled out and signed as required.
3. No date and/or initials on security tape.
4. Evidence of tampering with the mailing box or specimen.